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No. .....

In the Supreme Court of the United States

OCTOBER TERM, 1982

CARSONITE INTERNATIONAL CORPORATION, HIGH PERFORMANCE COMPOSITES, INC., and DONALD W. SCHMANSKI,

Petitioners,

v.

CARSON MANUFACTURING COMPANY, INC.,

Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

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QUESTIONS PRESENTED FOR REVIEW

1. Should not this Court end the seven-year *absence of authoritative interpretation of the Constitutional standard of patentability for combination inventions* and curb Circuit Court speculation which has lead to inventor confusion and loss of confidence in the patent system with narrow and chilling pronouncements such as the *en banc* 9th Circuit declaration in the present case, ". . . we now hold that the *unusual or surprising results test* is the *sole and exclusive measure* of patentability for mechanical combination patents . . ."—a holding which both usurps the role of this Court and flies directly in the face of this Court's landmark decision of *Graham v. John Deere?*

2. Does not the current decisional split regarding "synergism" as the test for validity of combination patents between the 1st, 5th, 6th, 8th and 9th Circuit Courts on the one hand and the 2nd, 3rd, 7th and 10th Circuit Courts and new Court of Appeals for the Federal Circuit on the other hand require exercise of this Court's supervisory authority to restore order to a federal patent enforcement system now undermined by conflicting and shifting patentability standards, forum shopping, and exhorbitant expense which collectively operate to destroy inventor incentive and impede the progress of science by turning patent enforcement into a costly game of chance —a result cogently illustrated in the present case wherein the patentee was denied due process by an *ex post facto* change in the standard of patentability by the appellate court without remand for new trial?

3. Should not this Court end a *century of silence* and resolve the further conflict among the circuits on the Seventh Amendment right to trial by jury in a patent case and establish uniform standards of appellate review of a jury's findings so that a patentee's 7th Amendment right to jury trial (now being requested in nearly one out of three cases) will not be further emasculated as was effectively done in this case where an *en banc* Circuit Court (despite two petitions for rehearing) totally disregarded implicit fact findings of the original jury proceeding?

4. Should not certiorari be granted to correct an extreme departure from proper judicial procedure which occurred in this case when the appellate court (a) invalidated claims of the patent on the sole ground that the Patent Office had rejected those claims in a pending reissue proceeding when, in fact, the Patent Office found the claims to be allowable over the same prior art as cited by the Court, (b) disregarded the trial record, substituting its own opinion over technical testimony of internationally recognized experts and venturing on its own fact-finding contrary to its own cited prior art, (c) overlooked the primary point of novelty in the claimed invention, resulting in omission of unexpected results demonstrating literal synergism, (d) failed to evaluate each of the patent claims in issue—evaluating instead the "elements of the patent," (e) erroneously mislabeled the claimed invention a "mechanical combination" despite its factual holding that the invention was "a single tangible element" and (f) disregarded implicit fact findings of the jury underlying verdicts of trademark infringement and unfair competition.

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CARSON MANUFACTURING COMPANY, INC.,

Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Petitioners, Carsonite International Corporation, High Performance Composites, Inc., and Donald W. Schmanski, pray that a writ of certiorari issue to review the judgment and opinions of the United States Court of Appeals for the Ninth Circuit entered in the above-entitled case.[1]

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[1] Parties to the proceedings:

Two decisions of the Ninth Circuit are in issue. Carson Manufacturing Co., Inc. (hereinafter Respondent or CARSON) and Petitioners Carsonite International Corporation, High Performance Composites, Inc. and Donald W. Schmanski (hereafter CARSONITE or SCHMANSKI) were parties to the initial appeal. This appeal was consolidated with two copending appeals in the Ninth Circuit for en banc hearing, including the following parties: Robert Sarkisian and Winn-Proof Corp., William A. Werner, and Wer-Nel Enterprises, Inc. (Appeal Nos. 78-3266 and 78-3270); Peter A. Hammerquist and Clark's Sheet Metal, Inc. (Appeal No. 79-4589).

REPORT OF OPINIONS

The initial, unpublished opinion of the Court of Appeals rendered on October 13, 1981, was reinstated by the en banc panel and is reported at 686 F2d 665—Appendix A hereto (cited herein as "Pet. App. 1 et seq.). The subsequent en banc opinion (Appendix E—cited herein as Pet. App. 23a et seq.) is reported at 688 F.2d 647 (1982).

JURISDICTION

The judgment of the Court of Appeals was entered on October 13, 1981. Petitioner filed a timely Petition For Rehearing, which was granted for en banc review (Appendix B) with copending Appeal Nos. 78-3266, 78-3270, and 79-4589 (Appendix C). The en banc opinion was filed September 21, 1982 (Appendix E—Pet. App. 23a et seq.). A second Petition For Rehearing, filed on October 5, 1982, was denied (Appendix G). This Petition For Writ of Certiorari has been timely filed in accordance with 28 U.S.C. Section 2101(c) and Supreme Court Rule 20.2,4. The jurisdiction of this Supreme Court is invoked pursuant to 28 U.S.C. Section 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

This case involves Article I, § 8, Cl 8, and the 7th Amendment of the Constitution, 35 U.S.C.A. § 103, and Lanham Trade-Mark Act. §§ 32, 43(a), 15 U.S.C.A. § 1114, 1125(a).

STATEMENT OF THE CASE

This is an action brought by Respondent for declar-

ation of invalidity of U.S. Patent 4,092,081 (the Schmanski patent). Petitioner counterclaimed for patent and trademark infringement, theft of trade secret and unfair competition.

The Schmanski invention is a delineator post (see illustration at Pet. App. 45a) installed in the ground to mark the edge of a highway to alert drivers to an imminent change in direction of travel. Although the delineator post is visible during daylight, its primary function is to provide nighttime delineation by positioning elevated, reflective surfaces along the roadside. These are appropriately spaced to provide a sense of depth and direction where darkness would otherwise obscure visibility.

Development of the Schmanski invention is a classic example of economic growth and public benefit from new technology. It demonstrates the successful union of American entrepreneurship and scientific research made possible and stimulated, in part, by the expectation of a fair return on investment protected by the U.S. patent system.

Petitioner Schmanski left his research work in the aerospace industry[2] to focus on more down-to-earth problems of highway safety—specifically highway delineation. He noted that the country's vast system of highways, with computer-controlled traffic and high technology vehicles, was still relying almost exclusively on the same type of roadway delineator that had been used for almost fifty years. It consisted merely of a steel post or channel

[2] Schmanski, as Vice President of Fiberite Corp., was instrumental in the design of portions of the space shuttle utilizing advanced fiber reinforced plastic composites. Trial transcript pg. 69 (hereafter RT69).

with a reflective button attached at its top. Installation was accomplished by hammering the channel directly into the ground. This feature of "driveability" was a decisive factor in market dominance by the steel post.

The convenience of "driveability," however, was counterbalanced by other disadvantages arising from the rigidity of the steel post. During vehicle impact, the steel channel often destroyed property and life. Motorcyclists and fiberglass vehicles were literally ripped apart during impact. And because the resulting bent delineator would seldom give proper reflection, nighttime delineation was lost, increasing the risk of further accidents until maintenance crews could effect repair by replacing the steel post or bending it back into position.

Schmanski realized that both cost and safety could be improved with a flexible post which would deflect and rebound upon impact. He learned, however, that the industry had already considered numerous plastic delineators,[3] and found installation time-consuming and expensive. Typically, a hole would be dug, the plastic delineator inserted, and cement and backfill applied. In short, the highway industry was determined to stick with steel because it was "driveable," despite the fact that in 1978, repair of steel delineators cost California over 1.5 million dollars, with more maintenance men losing their lives than highway patrolmen.[4]

With years of research experience and an inventor's

[3] California, for example, had separate specifications for steel, driveable posts and plastic, flexible posts.

[4] Testimony of Gerald Russell, Chief of the Division of Maintenance for the California Department of Transportation. RT 179.

fiberglass, with hazardous splinters and an unsightly, fractured appearance.

It was clear that the only acceptable solution would be a *nondestructive* fiberglass post. This, however, would require Schmanski to make a single fiberglass element whose structure and composition would embody *concurrent* and *conflicting* properties of stiffness and *nondestructive* flexibility. This conflict seemed unresolvable—how do you make a single, unbreakable post which is both rigid and flexible *at the same time?* Admittedly, the prior art showed the alternatives of one *or* the other, but not both.

In spite of the seeming impossibility of the task, and much to the surprise and disbelief of others skilled in the art, Schmanski eventually presented the world with its first nondestructive, flexible, driveable, fiberglass delineator. It was sturdy enough to be hammered at its top into hard ground, similar to its steel competition. Yet, this same rigid element (without fracture as with the "T") could withstand high-speed impact by deforming (Figure 2) and righting itself with flexibility never before experienced with fiber reinforced plastic.

The co-existence of conflicting properties of rigidity and *nondestructive* flexibility in a single fiberglass element were so unexpected that even those skilled in the art would believe it only after seeing the post driven into the ground like prior art steel and repeatedly subjected to vehicle impact *without breaking.*

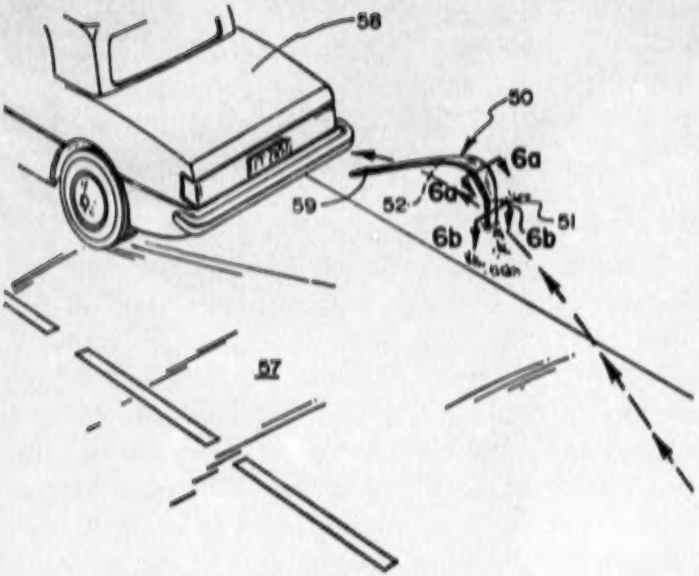

FIGURE 2

Excited by his success, but fearful of how quickly his solution could be duplicated with hindsight, Schmanski invested thousands of dollars to secure U.S. and foreign patents.[9] He then began the arduous task of educating skeptical highway departments of the reality of his nondestructive, flexible substitute for steel—giving countless demonstrations across the country of this new product referred to as the CARSONITE® Roadmarker.

Within several months following initial promotion, Respondent obtained CARSONITE samples, analyzed their construction and after only *two hours* of additional

[9] Foreign patents have issued on this invention in Canada, as well as in the prestigious European Patent Office covering the ECC. Foreign licensees, including 3M of Minnesota, are promoting this American product throughout the world.

design work,[10] announced a *revolutionary* new product[11] known to many as the Carson Roadmarker. Carson hired a Carsonite salesman[12] as sales manager and challenged Schmanski with a virtually identical product. Under state low-bid procedures, Schmanski realized his investment was lost without patent enforcement.

Notice was sent to Carson advising that a U.S. patent was about to issue on this product. Immediately upon publication of the Schmanski patent,[13] Carson selected the 9th Circuit forum and filed its action for declaratory judgment. Schmanski counterclaimed for patent infringement[14] and immediately filed a reissue application with the Patent Office, inviting Carson to bring its prior art and claims of invalidity into that forum. Carson declined and the reissue proceeded ex parte.

Prior to trial, Petitioner submitted all prior art received from Carson under 35 U.S.C. 282[15] for examination along with Carson's complaint for invalidity. The

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[10] John Duckett of Carson Manufacturing testified that it took about one to two hours during one day in November, 1977 to make his design for the Carson delineator. RT 659, 644.

[11] Duckett referred to the delineator as the "must unique and newest line of highway delineator equipment." RT 662. Respondent's initial advertisements referred to their product as "revolutionary."

[12] Bill Thurston, initially responsible for marketing the new Carsonite Roadmarker, took samples to Respondent and later became Respondent's sales manager. Defendants' Exhibit AO-1.

[13] Although the Schmanski patent issued on May 30, 1978, a backlog in printing delayed publication until August, 1978.

[14] Carsonite's counterclaim included allegations of trademark infringement, theft of trade secret, and unfair competition.

[15] Subparagraph (4) of this statute requires a party asserting patent invalidity or non-infringement to provide the patentee with a complete written disclosure of all prior art to be relied upon at trial.

reissue proceeding was not completed prior to trial; however, the Examiner issued an Official Action (Pet. App. 44a) rejecting only one of the 30 claims and holding all others to have allowable subject matter.[16] Following two weeks of testimony and numerous exhibits,[17] the jury rendered individual verdicts of validity on each claim in issue. Jury instructions were consistent with *Graham v. John Deere Co.*, 383 U.S. 1 (1966) and subsequent decisions of this Court, and were without objection by either party.[18]

Following denial of its Motion For Judgment NOV, Respondent appealed. Upon initial review, the Court of Appeals held the Schmanski patent to be a combination patent, despite the fact that it was *not* an old combination of mechanical elements.[19] The Court further acknowledged that the Patent Office had reviewed all relevant prior art during reissue and held that Claims 1, 12, 13, 17 and 18 were *entitled to a presumption of validity.*[20]

The Court quoted three parts of the four-part *Gra-*

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[16] Upon filing a reissue application, Schmanski added four additional claims, bringing the total claims to 30. Claim 20 was rejected by the Examiner; however, Schmanski has not yet had opportunity to counter the rejection because the reissue proceeding has been stayed pending outcome of this litigation.

[17] The jury was able to inspect physical properties of many prior art delineators.

[18] Respondent's request for an instruction requiring "unusual or surprising results" was denied without objection.

[19] The test of unusual or surprising results later established by the en banc panel was directed instead to mechanical combination patents. Pet. App. 27a.

[20] The Court failed to note that the Patent Office had also held that Claims 24 and 25 avoided the prior art and rejections of record. In fact the court invalidated claims 24 and 25 on the erroneous belief that "they were declared invalid by the examiner during the reissue proceedings." Pet. App. 44a, 6a.

ham analysis,[21] but then disregarded its application to the Schmanski claims. Instead, the Court stated:

> "Every element of the patent[22] is old in the art. Thus, the patented combination of the elements —a driveable, flexible marker—must yield an unusual or surprising result to be upheld." Pet. App. 11a.

Because the Court never focused on defining the differences[23] between *each* claimed invention and the prior art, it failed to identify the primary point of novelty —*nondestructive* flexibility—set forth in Claims 1 and 20. In fact, this feature is nowhere mentioned in the court's opinion. Nevertheless, "nondestructive deformation" was the focus of attention at trial and was even defined as synergistic in the literal sense[24] by Brandt Goldsworthy—renowned as founder and inventor of the pultrusion technology and member of the Plastics Hall

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[21] "The finder of fact must ascertain the state of the prior art, the differences between the disputed patent and the prior art, and the level of ordinary skill in the art." Pet. App. 10a.

[22] The Court's focus on "elements of the patent" conflicts with 35 U.S.C. 103 and its analysis under **Graham**, which requires inquiry into the "differences between the prior art and the **claims at issue** . . ." **Graham**, supra at 17. It is clear that the 9th Circuit erroneously analyzed the "patent" instead of the claims at issue.

[23] Petitioner suggests that such focus on "similarities" instead of differences is a major defect of the synergism analysis.

[24] Mr. Goldsworthy volunteered his own observation of synergism, clarifying his meaning to be the literal meaning wherein, "When you put two total different kinds of properties or effects together, that they have an effect on each other which is greater than the sum of either of the two." RT 1145. The jury was likewise aware of this critical **nondestructive** property. Upon being questioned regarding their need for a dictionary during deliberations, the **Forelady** stated, "Ultimately, what we were looking for, **non-destructive deformation** . . ." Pet. App. 41a.

of Fame. All of this evidence was apparently missed by the Court when it determined, "We need not review the record . . . because we conclude that the Schmanski patent is obvious as a matter of law." Pet. App. 11a. Judgment of the district court was accordingly reversed.

In response to a Motion For Rehearing, en banc review was granted on the following issues:

1. Is "synergism" or an "unusual or surprising result" a requisite to a finding of non-obviousness of a "combination" patent?

2. In determining non-obviousness, what questions may or must the trial court submit to the jury, and what questions may or must it reserve to itself?

3. What are the proper standards of review in this court of the answers of the trial court and of the jury to these questions?

With respect to the first issue on synergism, five of the six parties (despite adversarial positions) presented arguments against use of a separate standard from non-obviousness under 35 U.S.C. 103 as interpreted by this Court in *Graham v. John Deere*. Nevertheless, the en banc 9th Circuit held to the contrary—imposing "unusual and surprising results" as the "sole and exclusive measure of patentability for mechanical combination patents." Pet. App. 27a. The summary of en banc holdings on the three issues above are set forth at Pet. App. 30a. The reversal of the District Court judgment was reinstated following denial of Petitioners' second petition for rehearing.

REASONS FOR GRANTING REVIEW

I. THIS COURT SHOULD TAKE PROMPT ACTION TO (i) CLARIFY THE STANDARD OF VALIDITY FOR COMBINATION PATENTS, AND (ii) RESTORE UNIFORMITY, PREDICTABILITY AND CONFIDENCE IN THE FEDERAL SYSTEM FOR ENFORCEMENT OF U.S. PATENTS, THEREBY ENHANCING A CLIMATE FAVORABLE FOR PUBLIC INVESTMENT IN RESEARCH AND DEVELOPMENT.

In 1969, 1,298 new public issues of stock were sold to 31 million U.S. investors, raising $3.5 billion dollars of venture capital. In 1978, only 58 new issues were offered—a decline of 96%! Corresponding venture capital dropped to 214 million—a 94% reduction.[25] Alarmed by decreasing public interest in innovation, President Carter established the Advisory Committee to U.S. Domestic Policy Review on Industrial Innovation.[26]

A summary of findings of this Committee as viewed by a Committee member[27] was published in the *APLA Quarterly Journal*, Vo. 8, No. 2 (1980) pp. 131-154, along with other articles dealing exclusively with the role of innovation in national economic growth. Twelve copies of this Journal have been lodged with the Court

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[25] Washington Post, May 24, 1979.

[26] Executive Order No. 12045, dated March 27, 1978, 43 F.R. 13347.

[27] Tom Arnold, former President of the American Patent Law Association, former Chairman of the Patent Section of the ABA, and member of the Dept. of Commerce Patent Advisory Committee.

because of the extensive treatment of this timely issue. Particular reference is made to a fictitious dialogue between an "entrepreneureal spirit" and his attorney. pp. 143-148.

Among the reasons cited for industrial decline were (a) a decrease in the number of patents issuing to U.S. citizens, (b) a near flat corporate investment in research and development, and (c) a major deficit in foreign balance of payments for products of advanced technology. At least partial cause was attributed to the ebbing confidence of U.S. inventors and investors in U.S. patents and their ability to survive enforcement proceedings.

This attitude has resulted from conflicting and arbitrary court actions which arise in part from the following unsettled questions: (a) What standard or standards[28] of patentability will be required at trial within any given forum?;[29] (b) Will a different standard be employed upon appeal?; (c) In a jury trial, what type of verdict(s) should be requested?; (d) Will the jury findings (express or implied) be given any weight by the appellate panel and if so, how much?; and (e) *How much will it cost* to resolve these questions and enforce legitimate patent rights?

The present case is ideally suited for review by this

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[28] With the new CAFC it is now feasible that two separate standards of patentability will be required at trial, one satisfying local circuit or state law and a second meeting a different standard for the CAFC (in the event of appeal).

[29] The high occurrence of forum shopping is a well-documented fact in patent cases. The infringer attempts to file his plaintiff action for declaratory judgment in an "anti-patent" court, whereas the patentee seeks relief from infringement in a pro-patent jurisdiction.

Court because each of these questions has been sifted through jury trial, JNOV motions, contempt proceedings,[30] rehearing petitions, and full en banc review by the 9th Circuit. The *national impact* of present 9th Circuit action on these issues is clear in view of the fact that as of September 30, 1982, the *9th Circuit* had jurisdiction of almost *one-fifth of all patent cases pending* in the federal court system.[31]

This decision of the 9th Circuit has the immediate effect of impugning the integrity of every existing U.S. patent by virtue of its broad definition of what constitutes a "combination patent" and its strained requirement for "unusual or surprising results" as sole basis for patent validity.

A. THE 9TH CIRCUIT REQUIREMENT FOR "SYNERGISM" OR "UNUSUAL OR SURPRISING RESULTS" AS A *SINE QUA NON* FOR PATENTABILITY OF COMBINATION PATENTS IS A DIRECT CHALLENGE TO THE ROLE AND PRIOR DECISIONS OF THIS COURT.

The *first* en banc action dealing with synergism as a validity test has now been completed. Noting that the

[30] Respondent was held in contempt of the original District Court injunction. Respondent Appeal Nos. 80-4549 and 81-4086 in this matter have been stayed pending action of this Court.

[31] Unpublished statistics provided by the Administrative Office of the U.S. Courts, Statistical Analysis and Reports Div., showing a total of 1,402 pending patent cases, 227 being in the 9th Circuit.

"Supreme Court has not precisely defined the word and [that] circuit and district courts have variously described it," the 9th Circuit has attempted to remedy the resultant "uncertainty in litigation." Pet. App. 25a. After clarifying the functional equivalence of synergism with "unusual or surprising results," the en banc court has "reaffirmed" this test as the *sine qua non* for validity of combination patents. Without presenting any form of analysis justifying this holding (other than a singular claim that "we comply with the constitutional standard set out in *Graham*," the 9th Circuit has summarily established a rigid and arbitrary test which has been generally opposed by the patent bar, US Patent and Trademark Office and former Court of Customs and Patent Appeals. And despite its conclusory comment to the contrary, the 9th Circuit holding is in direct conflict with the landmark case of *Graham v. John Deere, supra.*

In *Graham*, the Court declined to apply the test of synergism in invalidating a *combination patent*, despite the fact that this test was used by the lower court.[32] Instead, the Court introduced the much praised four-part

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[32] In John Deere Company of Kansas City et al. v. William T. Graham et al., 333 F.2d 529 (8th Cir. 1964), the 8th Circuit cited Great A & P Tea Co. v. Supermarket Equipment Corp., 340 U.S. at 152 and held that, "to be patentable, a combination of individual elements must contribute something new; the elements must cooperate to produce an accumulation which exceeds the sum of its parts." No reference to this test of synergism is even mentioned in the Supreme Court opinion in Graham. Neither was synergism or its equivalent language mentioned in companion cases of Colmar, Inc. v. Cook Chemical Co., and Colgate-Palmolive Co. v. Cook Chemical, Id. at 26.

Graham test for determining nonobviousness under 35 U.S.C. 103.[33]

Four years later, in *Anderson's Black Rock, Inc. v. Pavement Co.*, 396 U.S. 57, the Court reaffirmed "strict observance" of the *Graham* test[34] and made reference to the need for a "new or different" function within the test of validity of combination patents.[35] The only reference made to "synergism" pertained to the *absence* of any argument on the subject. The Court noted that "a combination of elements *may* result in an effect greater than the sum of the several effects taken separately," *Id.* 61, but this was not held to be a requirement for patent validity.

When again confronted with a "combination patent" in *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976), the Court affirmed the integral role of the *Graham* analysis as part of the ultimate legal test for patent validity, and applied it as the basis for reversal. *Id.* 280. The Court then took issue with a *lower appellate court* fact-finding regarding "synergistic result," and stated:

> "Such combinations [which simply arrange old elements with each performing the same function

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[33] Quoting the Court, "Under Section 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." Id. at 17.

[34] Anderson's Black Rock, supra at 60.

[35] The Court cited to a pre-(Section 103) decision in Lincoln Co. v. Stewart-Warner Corp. 303 U.S. 545, 549. Petitioner suggests that "new or different" approaches the same novelty requirement as already expressed in 35 U.S.C. 102, when conceptually viewed with the common law Doctrine of Equivalence.

> it had been known to perform] are not patentable under standards appropriate for a combination patent. *Id.* 282.

The Court then reviewed several of these general standards of "non-patentable" conditions, without including any reference to lack of synergism or unusual and surprising results. *Id.* Based on these primary decisions regarding combination patents, synergism cannot be considered a *sine qua non*, or even an alternative test of patentability.

B. THE PRESENT DECISION ON SYNERGISM PLACES THE CIRCUITS IN AN EVEN 5-5 SPLIT, WITH PATENT LITIGANTS AND INVESTORS CAUGHT IN THE MIDDLE.

The conflict among the Circuit Courts on synergism is clearly out of hand.[36] The 2nd, 3rd, 7th and 10th Circuits and new Court of Appeals for the Federal Circuit[37] have rejected synergism in favor of the *Graham* test exclusively. The 1st, 5th, 6th, 8th and 9th Circuits, on the other hand, are requiring some form of synergism or unusual and surprising results to sustain combination patents, and are openly acknowledging the in-

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[36] **International Tel & Tel Corp. v. Raychem Corp., 538 F.2d 453 (1st Cir. 1976); Shackelton v. J. Kaufman Ironworkers, Inc., 689 F.2d 334 (2nd Cir. 1982); Rengo Co., Ltd. v. Molins Mach. Co., 657 F.2d 535 (3rd Cir. 1981); Farmhand, Inc. v. Anel Engineering Industries, 693 F.2d 1140 (5th Cir. 1982); Smith v. Acme General Corp., 614 F.2d 1086 (6th Cir. 1980); Republic Industries, Inc. v. Schlage Lock Co., 592 F.2d 963, 970 (7th Cr. 1979); Reinke Man. Co. v. Sidney Man. Corp., 594 F.2d 644 (8th Cir. 1979); Plastic Container Corp. v. Continental Plastics, 607 F.2d 885 (10th Cir. 1979).**

[37] **South Corp. v. U.S., 690 F.2d 1378, (1982). Accordingly the long-standing CCPA rejection of synergism in favor of Graham will apply.**

ability of the Circuits to resolve this issue. Pet. App. 26a. Such division is not only demeaning to the federal court system, but is unnerving to patent litigants who place their livelihoods in the hands of the courts.

Frustration must now be at a peak for both patentee and opposer in patent litigation. The judicial climate for forum shopping has never been more favorable with an equal number of forum choices for either side of the synergism issue. Furthermore, vacillating opinions even among judges of the same circuit make prediction of legal standard little more than a calculated guess.[38] And regardless of the trial results, an expensive appeal is a foregone conclusion!

Is it any wonder that more inventors are declining to risk the cost of patent procurement and enforcement in view of uncertainty as to whether a resulting patent will be upheld?[39] Could the *absence* of a unified judiciary with predictable standards of patent review partially explain the almost 20% lower settlement rate in patent litigation as compared to general litigation?[40]

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[38] Review of earlier decisions in each circuit show frequent changes in position by individual district court judges, as well as variance among the respective justices of individual circuits.

[39] The direct impact of the synergism test on patent procurement is evidenced by the recent holding of the 6th Circuit that the "claim of synergistic effect should be mentioned in the patent application and not put forward for the first time when validity of the patent is being tested in Court." **American Seating Co. v. National Seating Co.** 586 F.2d 611 at 621 (1978).

[40] In federal patent cases during the year ending September 30, 1982, 12.3% were resolved by trial. In general civil matters arising under diversity jurisdiction, only 10.1% required judicial resolution—an approximate 20% difference in rate of settlement. Administrative Office of the US Courts, Statistical Analysis and Reports Division.

Only this Court has the supervisory power to clarify the standard and meaning to be applied to "combination patents" and mandate its uniform application. Such action is made even more urgent by the current strained economy and business climate brought about, in part, by growing frustration with the U.S. patent system.

C. THIS CASE PRESENTS THE UNIQUE COMBINATION OF FACTS NEEDED FOR THOROUGH EVALUATION OF (i) WHETHER A "SINGLE TANGIBLE ELEMENT" CAN BE A "COMBINATION," (ii) WHETHER COMBINATION PATENTS REQUIRE A SEPARATE TEST FOR VALIDITY, AND (iii) WHETHER SYNERGISM, AS A TOOL OF ANALYSIS, DEFEATS THE OBJECTIVES OF THE *GRAHAM* TEST.

The Schmanski invention is *not* made up of a combination of mechanical elements, but is a "single tangible element" (Pet. App. 8a) which provides a combination of new properties of driveability and nondestructive flexibility previously unknown for fiberglass composites. Previous combination patents reviewed by this Court have all been comprised of mechanical components. In contrast the unibody delineator of Schmanski's invention falls somewhere between a mechanical combination and a chemical compound having neither components nor a single molecular structure.[41] Such interme-

[41] 35 USC 101 identifies four classifications of patentable subject matter—processes, machines, articles of manufacture and compositions of matter. The Schmanski invention appears to be closest to the "composition of matter" based on the following definition: "A composition of matter is an instrument formed by the intermixture of

synergism.[43] This Court should take this opportunity to evaluate and resolve the range and divergency of tests from *Graham* to synergism which have split the Circuits.

Finally, the Court should consider the practical weakness of synergism as a tool of analysis. This weakness is apparent in the present opinion of the 9th Circuit (Pet. App. 1 et seq.). In applying the synergism test, the Court first had to determine if the Schmanski patent was a "combination." To do this, the Court identified the purported Schmanski elements and then searched for the *same* elements in the prior art. Once such elements were *seemingly* located, the Court then searched for "unusual or surprising results." Not finding the looked-for results, the patent was shrugged off as invalid.

The flaw in this analysis arises with its departure from the required statutory inquiry into the quality of *differences* between the prior art and claimed invention.[44] Failure to apply this vigorous analysis of differences lead the 9th Circuit to unknowingly overlook material, distinguishing features in the inventions claimed.

For example, the Court failed to identify one of the most significant elements of each claim—the *non-destructive deformation response*. Instead, the Court mis-

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[43] See note 24. This can be mathematically shown by the traditional synergistic formula $1 + 1 > 2$. Since the prior art taught only the alternative choice between (i) driveability or (ii) flexibility, the "sum" of the effects of the prior art should be limited to the alternative expression "driveability OR flexibility." The Schmanski patent exceeds the sum of the parts because "driveability PLUS nondestructive flexibility" is greater than driveability OR flexibility.

[44] Hotchkiss v. Greenwood, 52 U.S. (11 How.) 248 (1856); McClain v. Ortmayer, 141 U.S. 419 (1981); Graham v. John Deere Co., supra., 35 USC 103.

identified the invention as merely a "driveable-flexible" marker. Therefore, upon realizing that the earlier "T" Delineator was a form of driveable-flexible marker, the case was resolved in the mind of the Court.

The Court then made egregiously erroneous factual findings,[45] invalidating the patent based on an assortment of *breakable* delineators. Undoubtedly, the Court was acting in good faith, but its actions were based on a *false perception* of the invention. Had the Court searched the prior art for *differences*, it would have immediately recognized the primary distinction of "nondestructive deformation" set forth in both Claims 1 and 20. Pet. App. 50a. The *Graham* approach ensures the requisite understanding of the invention for determination of validity. Review of this decision should be prompt to alert other courts—and the en banc 9th Circuit—to the fallibility of "synergism" as an analytical tool.

II. AN UPSURGE IN DEMAND FOR JURY TRIAL—ALMOST ONE OUT OF THREE—DEMONSTRATES RISING FRUSTRATION OF PATENT LITIGANTS WITH THE JUDICIARY, AN ATTITUDE FURTHER AGGRAVATED BY OPEN DISREGARD FOR JURY FINDINGS BY CIRCUIT COURTS.

Fifteen years ago only 2% of patent cases were

[45] A German patent (1,761,634) which was not even argued by Respondent at trial or on appeal was applied by the Court to invalidate the Schmanski patent. Pet. App. 11a. Its teaching, however, disclosed a fiberglass marker which was neither driveable at its top nor nondestructively flexible. Also, the Court held that the Humphrey delineator could be made of fiberglass under Schmanski's patent. Testimony at trial conceded this to be impossible.

tried to a jury. In 1975, the number had only reached 13%. The incidence of jury demand now exceeds 28%.[46] This remarkable shift from bench to jury trials suggests that patent litigants (usually patentees) believe that a jury will be more fair (or more predictable). Many judges are being perceived as "anti-patent" in disposition. Petitioner suggests that the convoluted standard of patentability and independent fact-finding at the appellate level encourage jury trials in view of 7th Amendment proscription against retrial of the facts.

Despite Constitutional encroachment, however, retrial of jury findings has become common practice in appellate review. In the present case the court noted:

> "The jury did not render a special verdict disclosing findings on *Graham* inquiries,[47] so we do not know how the jury arrived at its conclusion that the Schmanski patent was valid." Pet. App. 11a.

At this point, the appellate court had at least two options: (1) to study the record to see if substantial evidence existed in support of the separate verdicts on each claim, or (2) to disregard the record, assume the role of technical expert, and take the easier course of *de novo* review of the prior art *without the insight* provided by evaluation of the testimony and evidence at

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[46] Administrative Office statistics of the Federal Courts for Sep. 30, 1982, show that of 112 patent cases tried 31 were jury trials.

[47] Although the parties suggested special interrogatories on Graham findings, the district judge felt that correct instruction of the jury under Graham was adequate, without forcing jurymen to become "legal draftsmen" and to collectively formulate findings which would become meat for the chopping block of losing counsel.

trial. The 9th Circuit panel selected the latter, stating:

> "We need not review the record, however, because we conclude that the Schmanski patent is obvious as a matter of law." *Id.*

In short, any Constitutional value of Schmanski's jury trial had been totally emasculated. The 9th Circuit did not even apply the required "substantial evidence" test.[49]

III. INVENTOR CONFIDENCE IN PATENT ENFORCEMENT IS BEING FURTHER UNDERMINED BY SUBSTANTIAL CONFLICT AMONG THE CIRCUITS REGARDING THE ROLE OF THE JURY IN PATENT LITIGATION.

Rather than summarize the conflict among the Circuits[48] regarding standards of review for mixed questions of law and fact arising under the four-part *Graham* test, a more fundamental set of questions must be asked. Simply stated, (1) What Constitutional protection exists with respect to jury findings in a patent case? and (2) What effective guidelines can be provided by this Court to prevent disregard of such Constitutional right by Circuit Courts which assert their *de novo* right to re-try each case as a matter of law? This Court should now end its *century of silence* on these fundamental issues—particu-

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[48] See Dual Manufacturing & Engineering v. Burris Industries, 619 F.2d 660 (7th Cir. 1980); Control Components,, Inc. v. Valtek, Inc., 616 F.2d 892 (5th Cir. 1980); Panther Pump & Equipment Co. v. Hydrocraft, Inc., 468 F.2d 225 (7th Cir. 1972); Tights, Inc. v. Acme-McCrary Corp. 541 F.2d 1047 (4th Cir. 1976)—all cert. denied.

[49] The en banc panel held, "On appeal to this Court, we review the factual findings made by the jury under the substantial evidence test . . ." Pet. App. 31a.

larly in view of the wide disregard by the Circuits of the most recent (19th Century) precedent of this Court[50] which uniformly upholds a *meaningful* right to jury trial for patent litigants. Public confidence in the jury system is reflected by a 6-to-1 vote of the present jury favoring use of juries in patent cases. Pet. App. 41a.

IV. SCHMANSKI HAS BEEN DENIED HIS 7TH AMENDMENT RIGHT TO JURY TRIAL BY A POST-TRIAL CHANGE IN THE STANDARD OF PATENTABILITY.

Schmanski's initial jury trial was premised on factual evidence required under the *Graham* test, along with similar 9th Circuit decisions which imposed no requirement for "synergism." The jury, as fact-finder, was properly instructed on the three-part factual inquiry to be made under *Graham*. Instructions regarding the law of nonobviousness were given and the jury was further cautioned that:

> "If you find that any claim merely combines elements known in the art in a way in which they

[50] **Carver v. Hyde, 41 U.S. (16 Pet.) 513, (1842), the jury was instructed upon the claimed invention and was charged to determine the issue of infringement. The Supreme Court affirmed the jury verdict. Chief Justice Taney reviewed the record of the trial. He thereupon concluded that whether a particular element was an essential part of an invention was a question of fact for the jury to decide. In Keyes v. Grant, 118 U.S. 25, 6 S.Ct. 974, 30 L.Ed. 54 (1886), the Supreme Court held that where the scope and content of the prior art was not a matter of lay judicial knowledge, and where at trial the experts differed as to its pertinence in relation to the claimed invention, the issue raised was a material fact issue for the jury alone to decide. In Market Street Cable Ry. Co. v. Rowley, 155 U.S. 621, 15 S.Ct. 224, (1895), the Court laid down clear guidelines as to when the trial court was authorized to remove a patent validity issue from the jury.**

> have previously been combined to produce predictable results, the claim is invalid." (RT 1568)

The jury verdicts of validity were based on this evidence and legal instruction.

By changing the validity test to "unusual or surprising results", however, the 9th Circuit established a new criteria of evidence which could have been effectively presented at trial, if the new standard had been known. Since it was not, Schmanski was effectively denied his day in court! Furthermore, he was denied his 7th Amendment right for jury review of relevant evidence, since "validity" now turned on unusual results as the "sole and exclusive measure" of validity, as opposed to *differences* required by 35 USC 103 and *Graham supra.* The 9th Circuit should have at least remanded the matter for retrial under its new standard. Grant of this writ is necessary to remedy the 9th Circuit breach of (i) due process and (ii) 7th Amendment right, and to establish procedures to prevent similar occurrences in other pending jury cases.

V. THE CARSONITE CASE PRESENTS AN UNCOMMON EXAMPLE OF EXTREME DEPARTURE FROM PROPER JUDICIAL PROCEDURE, REQUIRING PROMPT SUPREME COURT INTERVENTION.

In addition to matters already presented (misreading Patent Office Findings in reissue, failing to independently evaluate each claim at issue, disregarding jury findings on patent issues) the 9th Circuit totally disregarded

implicit jury findings and uncontested factual evidence pertaining to trademark infringement and unfair competition by CARSON. See, for example, admissions in testimony (Pet. App. 37a) of CARSON'S president regarding *actual* confusion with CARSONITE® arising from Respondent's use of the name CARSON in connection with its fiberglass delineator. Collectively, the appellate court has failed to give a fair review of the trial record and has disregarded the "substantial evidence" test for resulting jury findings.

CONCLUSION

In *Graham Id* at 18, this Court counselled:

> "We believe that strict observance of the requirements laid down here will result in that uniformity and definiteness which Congress called for in the 1952 Act (35 USC 103)."

This writ should be granted as part of a renewed effort to revive a judicial commitment to uniformity in administration of the U.S. patent system, and other intellectual property interests.

DATED this 27th day of January, 1983.

Respectfully submitted,

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ALEXANDER L. STEVAS
CLERK

No. .....

In the Supreme Court of the United States

OCTOBER TERM, 1982

CARSONITE INTERNATIONAL CORPORATION, HIGH PERFORMANCE COMPOSITES, INC., and DONALD W. SCHMANSKI,

Petitioners,

v.

CARSON MANUFACTURING COMPANY, INC.,

Respondent.

APPENDIX

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

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APPENDIX A

CARSON MANUFACTURING COMPANY, INC.,
a California Corporation, Plaintiff-Appellant,

v.

CARSONITE INTERNATIONAL CORPORATION,
INC., and High Performance Composites, Inc.,
Nevada Corporations, Defendant-Appellees.

No. 79-4474.

United States Court of Appeals,
Ninth Circuit.

Argued and Submitted April 14, 1981.

Decided Oct. 13, 1981.

Holder of patent relating to driveable, flexible highway markers constructed of reinforced fiberglass brought action seeking damages and injunctive relief for patent infringement, trademark infringement, and unfair competition. The United States District Court for the Northern District of California, Samuel Conti, J., entered judgment for plaintiff on jury verdict, and defendant appealed. The Court of Appeals, Trask, Circuit Judge, held that: (1) the patent No. 4,092,081 was invalid because of obviousness, and (2) neither marks themselves nor manner in which underlying products were marketed created likelihood of confusion necessary for liability under the Lanham Act for trademark violation.

Reversed.

1. Patents 314(5)

Ultimate question of patent validity is a legal one.

2. Patents 112.1

Presumption of validity of a patent can be rebutted only by elder and convincing evidence. 35 U.S.C.A. § 282.

3. Patents 112.1

Where obviousness of a patent as compared to prior art is in issue and patent applicant fails to disclose relevant prior art, the presumption disappears; nevertheless, the presumption remains intact if the undisclosed prior art is merely cumulative of the cited art. 35 U.S.C.A. § 282.

4. Patents 112.1

Prior art undisclosed by patent applicant was merely cumulative of cited art, and therefore certain claims of the patent were entitled to a presumption of validity. 35 U.S.C.A. § 282.

5. Patents 26(2)

A combination patent will be upheld only if it produces an unusual or surprising result.

6. Patents 26(1)

Even though patented highway marker consisted of a single tangible element, it did not follow that the patent could not be considered a combination.

7. Patents 26(1)

Whether a patent is a combination patent depends,

not only on unitary or component nature of the patented invention or on tangibility of its elements, but instead on whether each element of the invention is old in the prior art.

8. Patent 18

Question of a patent's obviousness should be decided against background of three factual determinations; scope and contents of the prior art; differences between the prior art and claims at issue; and level of ordinary skill in the pertinent art.

9. Patents 314(5)

Ultimate question in determining a patent's obviousness is one of law: whether the differences are of such magnitude that they would not have been evident at time of invention to one possessed of ordinary skill in the art.

10. Patents 328(2)

Claims 1, 12, 13, 17, and 18 of patent No. 4,092,-081 relating to a driveable, flexible highway marker constructed of reinforced fiberglass were obvious as a matter of law and invalid.

11. Trade Regulation 334, 464

Question to be decided in determining questions of trademark violations is whether the marks create a likelihood of confusion such that consumers viewing one mark would probably assume that the product it represents is associated with source of a different product or service identified by the other mark and, though itself a question of law, this determination is based on six factual in-

quiries: strength of allegedly infringed mark; similarity in appearance, sound and meaning of the disputed marks; class of goods in question; marketing channels; evidence of intent of party using the infringing mark. Lanham Trade-Mark Act, §§ 32, 43(a), 15 U.S.C.A. §§ 1114, 1125(a).

12. Trade Regulation 334, 464

Neither trademarks themselves nor manner in which the underlying products were marketed created likelihood of confusion necessary for liability under the Lanham Act for trademark violation. Lanham Trade-Mark Act, §§ 32, 43(a), 15 U.S.C.A. §§ 1114, 1125(a).

Appeal from the United States District Court for the Northern District of California.

Before TRASK and BOOCHEVER, Circuit Judges, and CURTIS,* District Judge.

TRASK, Circuit Judge:

This appeal stems from a dispute over appellant Carson Manufacturing Co.'s manufacture and distribution of a highway marker which is very similar to a patented marker manufactured and distributed by appellee Carsonite International Corp. Appellant argues that the court below erred in awarding damage and injunctive relief for patent infringement, trademark infringement, and unfair competition based on a jury verdict of appellant's liability. We reverse.

---

* Honorable Jesse W. Curtis, Senior United States District Judge for the Central District of California.

U.S. 896, 97 S.Ct. 258, 50 L.Ed.2d 179; *see St. Regis Paper Co. v. Bemis Co.*, 549 F.2d 833, 838 (7th Cir.), *cert. denied*, 434 U.S. 833, 98 S.Ct. 119, 54 L.Ed.2d 94 (1977). However, where the obviousness of a patent as compared to the prior art is in issue and the patent applicant fails to disclose relevant prior art, the presumption disappears. *Hewlett-Packard Co. v. Tel-Design, Inc.*, 460 F.2d 625, 628 (9th Cir. 1972); *see Kamei-Autokomfort v. Eurasian Automotive Prods.*, 553 F.2d 603, 605 (9th Cir.), *cert. denied*, 434 U.S. 860, 98 S.Ct. 186, 54 L.Ed.2d 133 (1977); *Alcor Aviation, Inc., v. Radair, Inc.*, 527 F.2d 113, 115 (9th Cir. 1975), *cert. denied*, 426 U.S. 949, 96 S.Ct. 3170, 49 L.Ed.2d 1186 (1976). Nevertheless, the presumption remains intact if the undisclosed prior art is merely cumulative of the cited art. *Saf-Guard Prods., Inc. v. Service Pts., Inc.*, 532 F.2d at 1271 (quoting *Schnadig v. Gaines Mfg. Co.*, 494 F.2d 383, 391 (6th Cir. 1974)).

Claims 20, 24, and 25 are clearly not entitled to a presumption of validity, because they were declared invalid by the examiner during the reissue proceedings. Claims 1, 12, 13, 17, and 18, however, were declared valid even after presentation of previously uncited prior art references during those proceedings.

[4] Only one prior art reference, the Trelleborg patent, was not cited to the examiner at any stage of the proceedings. However, there is nothing about this reference that is not suggested by one or more of the references that were eventually cited to the examiner at some point in the proceedings. Thus, the Trelleborg

patent is merely cumulative of the cited art, and, therefore, Claims 1, 12, 13, 17, and 18 are entitled to a presumption of validity.

2

[5] A combination patent is an invention totally composed of old elements which are combined in an unprecedented manner. *See Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 280-81, 96 S.Ct. 1532, 1536-37, 47 L.Ed.2d 784 (1976); *M C Inds. v. Precision Dynamics Corp.*, 634 F.2d 1211, 1213 (9th Cir. 1980); *Herschensohn v. Hoffman*, 593 F.2d 893, 895 (9th Cir.), *cert. denied*, 444 U.S. 842, 100 S.Ct. 84, 62 L.Ed.2d 55 (1977). Such patents are subject to a more rigorous test of validity: A combination patent will be upheld only if it produces an "unusual" or "surprising" result. *M-C Inds. v. Precision Dynamics Corp., supra*, 634 F.2d at 1213; *Hewlett-Packard Co. v. Tel-Design, Inc.*, 460 F.2d 625, 629 (9th Cir. 1972); *Regimbal v. Scymansky*, 444 F.2d 333, 337-40 (9th Cir. 1971).[1] The rationale for heightened scrutiny of combination patents is to ensure that knowledge is not withdrawn from the public domain into the protected monopoly of one whose invention has not really advanced the art. *See A & P Tea Co. v. Supermarket Equip. Co.*, 340 U.S. 147, 152-53, 71 S.Ct. 127, 130-31, 95 L.Ed. 162 (1950). The issue here is whether each element of the Schmanski patent is old in the art.

It is evident from the record that each element of

[1] Sometimes this test is referred to as "synergism"—i.e., the whole must exceed the sum of its parts. See, e.g., Herschensohn v. Hoffman, supra, 593 F.2d at 897 n.1 (quoting Astro Music, Inc. v. Eastham, 564 F.2d 1236, 1238 (9th Cir. 1977)); Hewlett-Packard Co. v. Tel-Design, Inc., supra, 460 F.2d at 629.

the patent is indeed old in the art. The fiberglass formula (Claim 1), the variable El concept as it relates to driveability and flexibility (Claim 1), installation by means of driveable rigid body casings (Claims 12 and 13), the marker's shape (Claims 17 and 18), are each suggested by one or more of Humphrey, Schmanski-Rose, Barnett, the German patent, and Trelleborg.

Nevertheless, appellee argues that the Schmanski patent should not be considered a combination patent, because it protects a unitary object and not a mechanical or other device composed of discrete component parts. According to appellee, only the latter fall within the definition of a combination patent.

[6] The Schmanski marker does indeed consist of a single tangible element. Nevertheless, it does not follow that the patent cannot be considered a combination. The defining language used by the cases does not limit combination patents to devices composed of discrete component parts. *See, e.g., Great A & P Tea Co. v. Supermarket Equip. Co., supra,* 340 U.S. at 152, 71 S.Ct. at 130 ("an assembly of old elements," "unites old elements with no change in their respective functions"); *Sakraida v. Ag Pro, Inc., supra,* 425 U.S. at 280-81, 282, 96 S.Ct. at 1537 (combination of old elements); *M-C Inds. v. Precision Dynamics Corp., supra,* 634 F.2d at 1213 ("combines old elements in a different way"); *Herschensohn v. Hoffman, supra,* 593 F.2d at 895 ("All . . . elements are old in the art"). *But see SSP Agricultural v. Orchard-Rite, Ltd.,* 592 F.2d 1096, 1101 (9th Cir. 1979) ("mechanical" combination of old elements). Moreover,

Schmanski combines a number of abstract teachings and concepts which are individually old in the art. This court has long held that a patent need not be exclusively composed of tangible elements to be considered a combination. *Hewlett-Packard Co. v. Tel-Design, Inc., supra,* 460 F.2d at 629-30 & n.10; *see Santa Fe-Pomeroy v. P & Z Co.,* 569 F.2d 1084, 1091 (9th Cir. 1978); *Griffith Rubber Mills v. Hoffar,* 313 F.2d 1, 3 (9th Cir. 1963).

[7] The cases compel the conclusion that whether a patent is a combination patent depends, not on the unitary or component nature of the patented invention or on the tangibility of its elements, but instead on whether each element of the invention is old in the prior art. Under this analysis, we find the Schmanski patent to be a combination patent. Accordingly, we will uphold it only if we find that it produces an unusual or surprising result.

B

Appellant argues that the Schmanski patent is invalid because of obviousness, anticipation, overbreadth, and fraud. We find it necessary to consider only the first argument.

[8, 9] Nonobviousness is a statutory requirement of patentability. *See* 35 U.S.C. § 103. The question of a patent's obviousness should be decided against the background of three factual determinations: (1) the scope and content of the prior art, (2) differences between the prior art and the claims at issue, and (3) the level of ordinary skill in the pertinent art. *Graham v. John Deere*

Co., supra, 383 U.S. at 17, 86 S.Ct. at 693.[2] These factors were drawn from language in the legislative history of Section 103:

> An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant a patent.
>
> If this difference is such that the subject matter as a whole would have been obvious at the time to a person skilled in the art, then the subject matter cannot be patented.

Graham v. John Deere Co., supra, 383 U.S. at 14, 15, 86 S.Ct. at 692 (quoting S.Rep.No.1979, 82d Cong., 2d Sess. 6 (1952); H.R.Rep.No.1923, 82d Cong., 2d Sess. 7 (1952)). The finder of fact must ascertain the state of the prior art, the differences between the disputed patent and the prior art, and the level of ordinary skill in the art. The ultimate question, however, is one of law:

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[2] **Graham** also states that "secondary considerations" such as "commercial success long-felt but unsolved needs, failure of others, etc." may be relevant as indicia of obviousness. **383 U.S. at 17-18, 86 S.Ct. at 694. See also Photo Elect Corp. v. England, 581 F.2d 772, 782 (9th Cir. 1978)** (that a patented invention was copied is evidence of nonobviousness). The general (though by no means exclusive) pattern in this circuit has been to consider secondary indicia only when the issue of obviousness is still in doubt after consideration of the three primary determinations. **See, e.g., SSP Agricultural v. Orchard-Rite, Ltd., supra, 592 F.2d at 1101; Kamei-Autokomfort v. Eurasian Automotive Prods., supra, 553 F.2d at 606; Hewlett-Packard Co. v. Tel-Design, Inc., supra, 460 F.2d at 630 (9th Cir. 1966); Walker v. General Motors Corp. 362 F.2d 56 at 60. But see Saf-Guard v. Service Pts., Inc., supra, 532 F.2d at 1272-73** (court considered secondary factors even though obviousness was clear under primary determinations).

Are the differences of such magnitude that they would not have been evident at the time of invention to one possessed of ordinary skill in the art?

[10] The jury did not render a special verdict disclosing specific findings on the *Graham* inquiries, so we do not know how the jury arrived at its conclusion that the Schmanski patent was valid. We need not review the record, however, because we conclude that the Schmanski patent is obvious as a matter of law. Every element of the patent is old in the art. Thus, the patented combination of these elements—a driveable-flexible marker—must yield an unusual or surprising result to be upheld. We find it impossible to maintain that, in light of the teaching of the German patent, it would not have occurred to an inventor familiar with and skilled in the pertinent art to construct the Humphrey marker of reinforced fiberglass. Similarly, it is an obvious innovation, in view of the teachings of Telleborg and Humphrey, to remove the longitudinal rib and accentuate the curve of the Rose-Schmanski "T" marker.[3] Either innovation would yield a driveable-flexible marker virtually identical to the Schmanski marker.

This evidence of obviousness is sufficiently strong to overcome the presumption of validity properly accorded to Claims 1, 12, 13, 17, and 18. The Schmanski patent is neither an unusual nor surprising advance in the art, and we accordingly hold it invalid because of obviousness. The verdict of patent infringement is hereby reversed.

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[3] This innovation was suggested by appellee's own advertisements.

II

[11] Appellant claims that there is insufficient evidence to support the jury verdict that appellant is liable for violations of Sections 32 and 43(a) of the Lanham Trademark Act, 15 U.S.C. §§ 1114, 1125(a).[4] In issue here are the names or marks under which appellant and appellee market their respective highway markers. The question that we must decide is whether the marks create a likelihood of confusion such that "consumers viewing [one] mark would probably assume that the product it represents is associated with the source of a different product or service identified by [the other] mark." *Alpha Industries, Inc. v. Alpha Steel Tube & Shapes, Inc.*, 616 F.2d 440, 443 (9th Cir. 1980) (quoting *Scott Paper Co. v. Scott's Liquid Gold, Inc.*, 589 F.2d 1225, 1229 (3d Cir. 1978); *accord Jockey Club, Inc. v. Jockey Club of Las Vegas, Inc.*, 595 F.2d 1167, 1168 (9th Cir. 1979) (quoting *Fleischmann Distilling Corp. v. Maier Brewing Co.*, 314 F.2d 149, 151-52 (9th Cir. 1963)). Though itself a question of law, this determination is based on six factual inquiries: (1) the strength of the allegedly infringed mark; (2) the similarity in appearance, sound and meaning of the disputed marks; (3) the class of goods in question; (4) marketing channels; (5) evidence of actual confusion; and (6) evidence of

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[4] Appelle also asserts that "[o]ther general allegations of unfair competition were made and were proven at trial [which] went beyond Section 43(a)." This is simply untrue. No federal common law or pendant claims were alleged by appellee in its counterclaim; the sole jurisdictional bases plead for the claim were federal statutes involving patent and trademark infringement. Because appellee's asserted unfair competition claims were suggested for the first time on appeal, they cannot serve as a basis for upholding the jury verdict. Therefore, we decline to consider them.

the intent of the party using the allegedly infringing mark. *Id.; see Alpha Industries, Inc. v. Alpha Steel Tube & Shapes, Inc., supra,* at 444.

(1) Carsonite is a fictitious name that does not correspond to anything in the real world. Consequently, it is sufficiently "fanciful and distinctive" to receive the greater protection accorded strong marks. *See Jockey Club, Inc. v. Jockey Club of Las Vegas, Inc., supra,* 595 F.2d at 1168.

(2) The parties differ on names of the marks in issue. Appellant contends that its mark is "Roadmarker," and the appellee's mark is "Carsonite." Appellee contends that its mark is "Carsonite Roadmarker," and that appellant's mark is "Carson Roadmarker."

"Roadmarker" is at best a descriptive term that is not protectible as a trademark in the absence of evidence of secondary meaning. Appellee has supplied no such evidence. Indeed, its registered trademark is "Carsonite," and not "Carsonite Roadmarker." Moreover, appellant markets its highway marker as "Roadmarker," and not as "Carson Roadmarker." "Carson appears in appellants advertising only as part of the designation of appellant's company—"Division/Carson Mfg. Company." The record shows that "Carson Mfg. Company" is a bona fide business name that appellant has used for nearly 100 years. Finally, appellants use the distinctive "boomerang" logo of Carson Mfg. Company in marketing their "Roadmarker", whereas no logo at all appears on appellee's advertising. We conclude that the marks in issue

are "Carsonite" and "Roadmarker." These marks are not at all similar.

(3) The products denominated by the respective marks are virtually identical—driveable-flexible highway markers constructed of reinforced fiberglass.

(4) The manner in which markers are marketed tends to reduce the possibility of confusion. Orders are placed direct to the manufacturer; there is no central retail/wholesale outlet where a buyer could go and purchase appellant's product thinking it was appellee's. In bidding for state highway contracts, each manufacturer usually submits its own bid, and each such bid is generally given a separate file number.

(5) Appellee cites as evidence of confusion a California Department of Transportation (CalTrans) memo issued to clarify that appellee's marker was CalTrans-approved, whereas appellant's was not. It also relies on an order for "Carsonite Roadmarkers" which was erroneously placed with appellant. Appellant concedes that some confusion was evident in the several months immediately following its entry into the market, but that such confusion quickly dissipated once appellant established itself as a competitor to appelle. Appellee cites no examples of confusion that occurred significantly after appellant's initial entry into the market.

(6) There is no evidence of intent that appellant intended to confuse buyers and trade off appellee's goodwill when it chose the name for its marker. When orders for "Carsonite Roadmarkers" were placed with it rather

than with appellee, appellant explained to the buyers that the marker it sold was not the "Carsonite Roadmarker." According to appellant, the orders were filled only after the buyers understood that there were two different companies and two different products.

[12] As a matter of law, we conclude that appellant is not liable to appellee under either Section 32 or Section 43(a). The evidence is simply insufficient to support the conclusion that a violation occurred. It is clear from the record that neither the marks themselves (Section 32) nor the manner in which the underlying products are marketed (Section 43(a)) create the likelihood of confusion necessary for liability under the Lanham Act. *Cf. Alpha Industries, Inc. v. Alpha Steel Tube & Shapes, Inc., supra* (holder of registered mark "ALPHA" given no relief under Lanham Act for defendant's use of "ALPHA STEEL TUBE" or "ALPHA STEEL TUBE & SHAPES"). The verdicts of liability under Sections 32 and 43(a) are hereby reversed.

The judgment is REVERSED.

APPENDIX B

UNITED STATES COURT OF APPEALS FOR NINTH CIRCUIT

Filed March 3, 1982
No. 78-3270

ROBERT SARKISIAN,

Plaintiff-Appellee,

vs.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Appellants.

No. 79-4474

CARSON MANUFACTURING COMPANY, INC., a California Corporation,

Plaintiff-Appellant,

vs.

CARSONITE INTERNATIONAL CORPORATION, INC., and HIGH PERFORMANCE COMPOSITES, INC., Nevada Corporations,

Defendant-Appellees.

No. 79-4589
ORDER

PETER A. HAMMERQUIST,

Plaintiff-Appellee,

vs.

CLARKE'S SHEET METAL, INC.,

Defendant-Appellant.

Before: BROWNING, Chief Judge, WRIGHT, CHOY, GOODWIN, WALLACE, SNEED, KENNEDY, ANDERSON, HUG, TANG, SCHROEDER, FLETCHER, FARRIS, PREGERSON, ALARCON, POOLE, FERGUSON, NELSON, CANBY, BOOCHEVER, NORRIS, and REINHARDT, Circuit Judges

Upon the vote of a majority of the regular active judges of this court, it is ordered that these cases shall be reheard by an en banc panel of the court pursuant to Rule 25 of the Rules of the United States Court of Appeals for the Ninth Circuit. The previous three-judge panel assignments are hereby withdrawn.

JAMES BROWNING,
Chief Judge

APPENDIX C

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Filed April 2, 1982

No. 78-3266

ROBERT SARKISIAN,

Plaintiff-Appellee,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Appellants,

No. 78-3270

ROBERT SARKISIAN,

Plaintiff-Cross-Appellant,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Cross-Appellees.

No. 79-4474

CARSON MANUFACTURING COMPANY, INC., a California Corporation,

v.

CARSONITE INTERNATIONAL CORPORATION, INC., and HIGH PERFORMANCE COMPOSITES, INC., Nevada Corporations,

Defendant-Appellees.

No. 79-4589

ORDER

PETER A. HAMMERQUIST,

Plaintiff-Appellee,

v.

CLARKE'S SHEET METAL, INC.,

Defendant-Appellant.

Before: BROWNING, Chief JUDGE, WRIGHT, GOODWIN, WALLACE, ANDERSON, TANG, SCHROEDER, FARRIS, FERGUSON, NELSON and CANBY, Circuit Judges

The parties shall submit supplemental briefs not to exceed 25 pages addressing the following questions as they apply to their respective cases:

1. Is "synergism" or an "unusual or surprising result" a requisite to a finding of non-obviousness of a "combination" patent?

2. In determining non-obviousness, what questions may or must the trial court submit to the jury, and what questions may or must it reserve to itself?

3. What are the proper standards of review in this court of the answers of the trial court and of the jury to these questions?

Appellants' briefs shall be filed by April 30, 1982. Appellees' briefs shall be filed by May 20, 1982. Ap-

APPENDIX D

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Filed June 4, 1982
No. 78-3266

ROBERT SARKISIAN,

Plaintiff-Appellee,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Appellants,

No. 78-3270

ROBERT SARKISIAN,

Plaintiff-Cross-Appellant,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Cross-Appellees.

No. 79-4474

CARSON MANUFACTURING COMPANY, INC., a California Corporation,

v.

CARSONITE INTERNATIONAL CORPORATION, INC., and HIGH PERFORMANCE COMPOSITES, INC., Nevada Corporations,

Defendant-Appellees.

No. 79-4589

ORDER

PETER A. HAMMERQUIST,

Plaintiff-Appellee,

v.

CLARKE'S SHEET METAL, INC.,

Defendant-Appellant.

These cases shall be consolidated for oral argument. Each side in each of the cases shall be allowed 20 minutes. Counsel for all parties shall confer and agree upon an orderly presentation that will avoid duplication.

APPENDIX E

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Filed September 21, 1982

Nos. 78-3266
78-3270
DC# CV 75-1131

(D. Oregon)

ROBERT SARKISIAN,

Plaintiff-Appellee/
Cross-Appellant,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Appellants/
Cross-Appellees.

No. 79-4474

DC# CV 78-1763
(N.D. Cal.)

CARSON MANUFACTURING COMPANY, INC., a California Corporation,

Plaintiff-Appellant,

v.

CARSONITE INTERNATIONAL CORPORATION, INC., and HIGH PERFORMANCE COMPOSITES, INC., Nevada Corporations,

Defendant-Appellees.

No. 79-4589

DC# CV 76-766
(D. Oregon)

OPINION

PETER A. HAMMERQUIST,

Plaintiff-Appellee,

v.

CLARKE'S SHEET METAL, INC.,

Defendant-Appellant.

Appeals from the United States District Court
for the District of Oregon,
District Judge Otto R. Skopil, Presiding,
and from the United States District Court
for the Northern District of California,
District Judge Samuel Conti, Presiding.
[Argued and Submitted June 14, 1982]

Before: BROWNING, Chief Judge, WRIGHT, GOODWIN, WALLACE, ANDERSON, TANG, SCHROEDER, FARRIS, FERGUSON, NELSON and CANBY, Circuit Judges.*

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*Judge Skopil, not a member of the en banc court, recused himself and did not participate in the voting to take the cases en banc.

PER CURIAM:

Pursuant to Ninth Circuit General Order 5.5(d), we ordered rehearing en banc to address issues of patent law raised in three recent cases. *Sarkisian v. Winn-Proof Corp.*, ... F.2d ..... (9th Cir. 1981); *Hammerquist v. Clarke's Sheet Metal, Inc.*, 658 F.2d 1319 (9th Cir. 1981); *Carson Manufacturing Co. v. Carsonite International Corp.*, ... F.2d ..... (9th Cir. 1981). They are:

1. Is "synergism" or an "unusual or surprising result" a requisite to a finding of nonobviousness of a combination patent?

2. In determining nonobviousness, what questions may or must the trial court submit to the jury and what questions may or must it reverse to itself?

3. What are the proper standards of review of the answers of the district court and of the jury to these questions?

INTRODUCTION

I.

Synergism is one of a number of words and phrases used by the courts to express that the degree of innovation required to meet the Constitutional test of invention or nonobviousness set forth in 35 U.S.C. § 103 is rarely found in a combination of old elements. The Supreme Court has not precisely defined the word, and circuit and

district courts have variously described it.[1] Those various definitions have produced uncertainty in litigation requiring preciseness. Use of the word, therefore, should be avoided unless the combination in issue is synergistic in the literal sense.

We often have referred to the principle of synergism

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[1] Although the Ninth Circuit has long equated synergism with "unusual or surprising" consequences, other circuits have adopted competing definitions. See, e.g., **NDM Corp. v. Hayes Products, Inc.**, 641 F.2d 1274 (9th Cir.), **cert. denied**, 102 S.Ct. 970 (1981); **Tveter v. AB Turn-O-Matic**, 633 F.2d 831 (9th Cir. 1980), **cert. denied**, 451 U.S. 911 (1981); **Rex Chainbelt Inc. v. Harco Products, Inc.**, 512 F.2d 993 (9th Cir.), **cert. denied**, 423 U.S. 831 (1975).

The Seventh Circuit, which has rejected the "synergism" test due to what the court felt were insurmountable definitional problems, defined synergism:

> A definition of synergism that reflects its etymon is that the elements in the combination must cooperate or interact with each other. So defined, synergism distinguishes those inventions in which the parts are merely aggregated, and those in which the parts coact with each other so that the result comes from the combined effect of the several parts and not simply from the separate action of each. Under this formulation, the presence or absence of synergism proves little. Today, almost all mechanical devices consist of parts which interact with each other.

Republic Industries, Inc. v. Schlage Lock Co., 592 F.2d 963, 970 (7th Cir. 1949).

The Second Circuit, see **Champion Spark Plug Co. v. Gyromat Corp.**, 603 F.2d 361, 372 (2d Cir. 1979), **cert. denied**, 445 U.S. 916 (1980), and the Tenth Circuit, **Plastic Container Corp. v. Continental Plastics of Oklahoma, Inc.**, 607 F.2d 885, 904-05 (10th Cir. 1979), **cert. denied**, 444 U.S. 1018 (1980), have followed the Seventh Circuit in its rejection of "synergism." In Chief Judge Markey's address, "The Synergism Virus: Cause and Cure," 496 BNA Patent, Trademark & Copyright Journal D-1 to D-3 (Sept. 18, 1980), he condemned synergism as an impossible standard: " 'Synergism' in the dictionary sense is applicable only to chemistry where, for example one may combine two gases to produce a liquid, or to the allied drug act, where two drugs may have an effect greater when combined than when taken separately."

in our patentability opinions concerning combination inventions. A close reading of those decisions reveals that this circuit always has regarded synergism as a functional equivalent of the "unusual or surprising results" test as the proper means of assessing nonobviousness under 35 U.S.C. § 103.[2]

To reduce the unforeseen confusion that this unnecessary use of equivalent terms has injected into the law of patentability in this circuit, we now hold that the unusual or surprising results test is the sole and exclusive measure of patentability for mechanical combination patents in this circuit. *See Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152 (1950).

The *Sarkisian* disquisition on the meaning of synergism, which attempts to distinguish between the "real" meaning of synergism and the unusual or surprising test, disavows the long-established test. The unacceptable effect of the *Sarkisian* analysis is to lower the standard of patentability for combination patents.[3] The standard of patentability expressed in the unusual or surprising

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[2] See NDM Corp. v. Hayes Prods. Inc., 641 F.2d 1274 (9th Cir.), cert. denied, 102 S.Ct. 970 (1981); Tveter v. AB Turn-O-Matic, 633 F.2d 831 (9th Cir. 1980), cert. denied, 451 U.S. 911 (1981); Satco, Inc. v. Transequip, Inc., 594 F.2d 1318 (9th Cir.), cert. denied, 444 U.S. 865 (1979); Herschensohn v. Hoffman, 593 F.2d 893 (9th Cir.), cert. denied, 444 U.S. 842 (1979); Penn Int'l Indus. v. Pennington Corp., 583 F.2d 1078 (9th Cir. 1978).

[3] The Sarkisian opinion correctly notes the axiom that hindsight is not relevant in litigation. What may seem surprising prior to the combination of old elements is more likely to appear common by hindsight. We reiterate that the test for obviousness should scrutinize the combination as of its announcement.

test indicates the need to exercise caution when deciding to permit the patenting of a combination of old elements.

In reaffirming the unusual or surprising test as applied to a combination of old elements, we comply with the Constitutional standard set out in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), and necessarily embodied in § 103. As applied to a combination of old elements, "obviousness" is a term of art. The unusual or surprising formulation clarifies the obviousness standard as applied to combinations of old elements. That formulation has been successful in so doing[4] and should be retained.

II.

The Constitutional standard of patentability set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), requires three findings of fact to support a conclusion about obviousness: (1) the nature of the prior art, (2) the differences between the prior art and the patented device, and (3) the level of ordinary skill in the pertinent art.

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[4] **NDM Corp. v. Hayes Products, Inc., 641 F.2d 1274, 1280 (9th Cir.), cert. denied, 102 S.Ct. 970 (1981); M-C Industries, Inc. v. Precision Dynamics Corp., 634 F.2d 1211, 1214 (9th Cir. 1980); Tveter v. AB Turn-O-Matic, 633 F.2d 831, 835 (9th Cir. 1980); Palmer v. Orthokinetics, Inc., 611 F.2d 316, 323 (9th Cir. 1980); Satco, Inc. v. Transequip, Inc. 594 F.2d 1318, 1322 (9th Cir.), cert. denied, 444 U.S. 865 (1979); Herschensohn v. Hoffman, 593 F.2d 893, 896-97 (9th Cir.), cert. denied, 444 U.S. 842 (1979); Penn Int'l Industries v. Pennington Corp., 583 F.2d 1078, 1081 (9th Cir. 1978); Photo Electronics Corp. v. England, 581 F.2d 772, 775, 781 (9th Cir. 1978); Rex Chainbelt, Inc. v. Harco Products, Inc., 512 F.2d 993, 999 (9th Cir.), cert. denied, 423 U.S. 831 (1975); Hewlett-Packard Co. v. Tel-Design, Inc., 460 F.2d 625, 629 (9th Cir. 1972); Reeves Instrument Corp. v. Beckman Instruments, Inc., 444 F.2d 263, 270-71 (9th Cir.), cert. denied, 404 U.S. 951 (1971); Santa Anita Mfg. Corp. v. Lugash, 369 F.2d 964, 966-67 (9th Cir. 1966), cert. denied, 389 U.S. 827 (1967).**

Id. at 17. These factual determinations are made by the fact finder, preferably by detailed special interrogatories in jury trials, and by detailed findings in nonjury trials. Fed. R. Civ. P. 52(a).

On the basis of these findings, the court must determine obviousness as a matter of law. *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950). It may submit the question of obviousness to the jury for its guidance, *cf. Velo-Bind, Inc. v. Minnesota Mining & Mfg. Co.*, 647 F.2d 965, 971 (9th Cir.) (obviousness finding by the jury), *cert. denied*, 102 S.Ct. 658 (1981), but retains the duty to decide the question independent of the jury's conclusion.

The *Hammerquist* opinion affirmed a jury's conclusion that a patent was not obvious. It focused on the court's instructions to the jury and the jury's conclusions and findings. Nevertheless, we are satisfied that the *Hammerquist* panel found a sufficient intervention by the judge. It noted:

> We are satisfied that the trial judge carefully performed his duty in reviewing the jury's verdict. He adopted as his own the jury's law application.

658 F.2d at 1323.

Portions of *Hammerquist* appear to approve committing the ultimate question of obviousness to the jury upon proper instructions in the law. *E.g., id.* at 1322 ("The question of obviousness for the purpose of allocating the work between judge and jury is a question for the

trier of fact upon proper instruction on the law."). Because we hold that the court ultimately must decide obviousness specifically as a matter of law, we disapprove any language or procedure apparently to the contrary in *Hammerquist*.

III.

The appropriate standard of appellate review simply depends on which portion of the obviousness inquiry is in issue. The predicate factual determinations are reviewed under the appropriate standard for findings of fact. If made by the jury, we review for support by substantial evidence. *California Computer Products v. International Business Machines Corp.*, 613 F.2d 727, 734 (9th Cir. 1979). We review a judge's findings under the clearly erroneous test. Fed. R. Civ. P. 52(a).

The ultimate question of obviousness, including whether the combination in issue displays an unusual or surprising result, is a question of law. It is subject to our independent review.

IV.

In summary, we hold the following:

1. A determination of an "unusual or surprising result" is a requisite to a finding of nonobviousness of a combination patent.

2. (a) In determining nonobviousness in all patent litigation, the trial court in a jury trial must submit to the jury determination of (i) the nature of the prior art, (ii) the differences between the prior art and the patented device, and (iii) the ordinary level of skill in

the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

(b) The court may submit the ultimate fact of obviousness to the jury for a nonbinding advisory opinion. *Cf. Velo-Bind, Inc. v. Minnesota Mining & Mfg. Co.*, 647 F.2d 965, 971 (9th Cir.), *cert. denied*, 102 S.Ct. 658 (1981).

(c) The court must, in all cases, determine obviousness as a question of law independent of the jury's conclusion. Constitutional standards of patentability must not be evaded by improper fact finding. *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950); *see also Speed Shore Corp. v. Denda*, 605 F.2d 469, 471 (9th Cir. 1979).

3. (a) On appeal to this Court, we review the factual findings made by the jury under the substantial evidence test and those by the judge using the clearly erroneous test of Fed. R. Civ. P. 52(a).

(b) The legal question of obviousness is subject to independent review by this Court, free of the restraining influence of the clearly erroneous rule.

CONCLUSION

We remand the *Sarkision* case to the panel for determination, in accordance with this opinion, whether the patented device produced an unusual or surprising result.

In *Hammerquist*, the court adequately determined whether the jury's conclusion of obviousness was ap-

propriate as a matter of law. Any portion of that opinion that implies the question of obviousness is simply a question of fact, subject to the substantial evidence test, is disapproved. All statements in *Hammerquist* that approve the use of the term "synergism" are disapproved.

The *Carson* opinion is not in conflict with this opinion. Any statement therein that may reflect approval of the use of the word "synergism" is disapproved.

APPENDIX F

IN THE U.S. COURT OF APPEALS FOR THE NINTH CIRCUIT

No. 79-4474

ORDER FOR PUBLICATION

CARSON MANUFACTURING COMPANY, a California corporation,

Plaintiff-Appellant,

vs.

CARSONITE INTERNATIONAL CORPORATION, INC., and High Performance Composites, Inc., Nevada Corporations,

Defendant-Appellees.

Before: BROWNING, Chief Judge, WRIGHT, GOODWIN, WALLACE, ANDERSON, TANG, SCHROEDER, FARRIS, FERGUSION, NELSON and CANBY, Circuit Judges.

It is ordered that the panel opinion filed on October 13, 1981, and later withdrawn from publication, will now be published.

FOR THE COURT:

EUGENE A. WRIGHT,
U.S. Circuit Judge

September 17, 1982

APPENDIX G

Filed November 1, 1982

Nos. 78-3266
78-3270

DC# CV 75-1131
(D. Oregon)

ROBERT SARKISIAN,

Plaintiff-Appellee/
Cross-Appellant,

v.

WINN-PROOF CORP., WILLIAM A. WERNER, and WER-NEL ENTERPRISES, INC.,

Defendants-Appellants/
Cross-Appellees.

No. 79-4474

DC# CV 78-1763
(N.D. Cal.)

CARSON MANUFACTURING COMPANY, INC., a California corporation,

Plaintiff-Appellant,

v.

CARSONITE INTERNATIONAL CORPORATION, a Nevada corporation, HIGH PERFORMANCE COMPOSITES, a Nevada corporation,

Defendants-Appellees.

APPENDIX H

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

No. 79-4474
DC No. CV 78-1763 SC

CARSON MANUFACTURING COMPANY, INC., a California Corporation,

Plaintiff-Appellant,

vs.

CARSONITE INTERNATIONAL CORPORATION, INC., et al.,

Defendants-Appellees.

APPEAL from the United States District Court for the Northern District of California.

THIS CAUSE came on to be heard on the Transcript of the Record from the United States District Court for the Northern District of California and was duly submitted.

ON CONSIDERATION WHEREOF, It is now here ordered and adjudged by this Court, that the judgment of the said District Court in this Cause be, and hereby is reversed.

Filed and entered October 13, 1981.

APPENDIX I

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

Civil Action No. C78-1763 SC

CARSONITE INTERNATIONAL CORPORATION, a Nevada corporation; HIGH PERFORMANCE COMPOSITES, INC., a Nevada corporation; HPC, INC., a Nevada corporation; and DONALD W. SCHMANSKI, an individual,

Plaintiffs,

v.

CARSON MANUFACTURING CO., INC.
a California corporation,

Defendants.

CARSONITE INTERNATIONAL CORPORATION, et al.,

Counterclaimants,

v.

CARSON MANUFACTURING CO., INC.
et al.,

Counterdefendants.

[TRANSCRIPT EXTRACT-PORTIONS OF EXAMINATION OF O'CONNELL, PRESIDENT OF CARSON MANUFACTURING CO. RT 638-650.]

Q. MR. NORTH: Did you know that the word "Carsonite" was a registered trademark?

A. MR. O'CONNELL: I know that the name "Carsonite" is a registered trademark.

Q. When did you first learn of that?

A. Again, it was probably sometime in 1977 but I can't speak of the month. My awareness came about with seeing the name "Carsonite" with the registered mark after the name.

* * *

Q. Did you realize that a registered trademark constitutes notice to the whole world in a particular field that someone else should not come in and introduce a product with a confusingly similar name?

A. I would guess that I would have assumed that.

* * *

Q. Therefore, is it a fair conclusion to state that Carsonite had a registered trademark in the field as we have discussed for these delineators of composite structure prior to your involvement in the field of highway delineation?

A. That's correct.

Q. I suppose in laymen terms then we could say that comparing these two parties of Carsonite . . . and Carson Manufacturing, which one of these two parties would be the newcomer in the field of highway delineation?

A. In terms of the registered trademark, Carson Manufacturing would be a newcomer.

* * *

Q. Mr. O'Connell, I'm showing you exhibit marked Plaintiff's Exhibit 97 [the alleged infringing Carson delineator]. Would you state — is it true that there is the name "Road Marker" on this delineator?

A. That's correct.

Q. Isn't it also true that the name "Carson" is immediately below the name "Road Marker"?

A. Not the name "Carson," no, sir. It says "Carson Manufacturing Company," which is the corporate identity.

Q. That's right. But included in that corporate identity is the word "Carson"; isn't that true?

A. Is the name "Carson," that's correct. It's not a word, it's a name.

Q. It's a name. So the name "Carson" then appears with the name "Road Marker"?

A. Yes, sir. Yes, sir, it does.

* * *

Q. You have never heard anyone refer to your product as a "Carson Road Marker"?

A. I have heard our product called a great many things.

Q. Did those include the reference "Carson Road Marker"?

A. I would have to guess that that was one of the names that they referred to it as.

* * *

Q. The issue we're dealing with here is a very simple one, Mr. O'Connell. We have a client here, a party who has a registered trademark.

A. Yes, sir.

Q. And it's very clear that the trademark says, "for structural members made of composite." Now, we've indicated that this structural member, Road Marker, Division of Carson Manufacturing, is, indeed, a very product of that description. Is that not true?

A. I don't know that that's been totally ascertained, but it is a similar product.

Q. Is it made of composite of fiber and resin and —

A. Yes, it is.

* * *

Q. Mr. O'Connell, can we agree that there was at least some level of actual confusion in the marketplace among people using the road markers representing Carson and Carsonite?

A. There may well have been, Mr. North.

* * *

Q. Has Carson Manufacturing ever received a request for a delineator product from a purchaser which in effect was requesting a Carsonite road marker?

A. Yes, sir.

Q. You have received those?

A. Yes, sir.

* * *

Q. Did you ever supply any *Carson Road Markers* in response to those requests for a *Carsonite* road marker?

A. Ultimately, yes, sir, we did.

[TRANSCRIPT OF CONCLUDING JURY COMMENTS]

THE COURT: One question I want to ask you, *what was the dictionary used for? What Word?*

THE FORELADY: A couple of words.

THE COURT: What were they?

THE FORELADY: *Ultimately, what we were looking for, non-destructive deformation,* but we couldn't find non-destructive, but we used it for trade secret, which was very valuable.

THE COURT: And do you find that this type of a case should be tried to a jury?

JUROR NUMBER SEVEN: Yes.

JUROR NUMBER FIVE: I am not so sure.

THE COURT: Let's go down the list. Do you think this type of a case should be tried by a jury?

JUROR NUMBER ONE: I really have no comment.

JUROR NUMBER TWO: Yes.

JUROR NUMBER THREE: I disagree. I don't think the lay person has enough knowledge of the laws of patents. It's very involved and I thought it was. Yes. I don't think it should be.

JUROR NUMBER FOUR: I think it should be, although it was very, very technical.

THE COURT: Even though it's technical, you think it should be tried by a jury?

JUROR NUMBER FOUR: Yes.

JUROR NUMBER FIVE: There are more things than just the technicalities involved and if it were just technical people judging it, too much would be left out, but I do think we need a little, perhaps, one or two technicians on the jury.

THE COURT: Uh-huh.

JUROR NUMBER SIX: I think it should be tried by a jury.

THE COURT: Jury.

JUROR NUMBER SEVEN: This was a very difficult case. We found that out today. We have worked hard.

THE COURT: I know you have.

JUROR NUMBER SEVEN: But it was an education as well for all of us.

THE COURT: What do you think, if you had a patent, would you want it tried before a jury?

JUROR NUMBER THREE: No, honestly.

THE COURT: And the forelady?

THE FORELADY: I think it's part of the process and the advantage of having more people. You tend to look at the truth differently, or look at an item differently, and you get a different perspective.

THE COURT: Suppose you had a patent. Would you want it tried before a jury?

THE FORELADY: I think I would.

THE COURT: You would.

THE FORELADY: I think I would.

THE COURT: Okay. Fine.

Well, thank you again and we hope to see you soon. (Whereupon, the trial was concluded.)

APPENDIX J

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
938,241	08/30/78	Donald W. Schmanski	

Vaughn W. North
Univ. of Utah
2045 Annex
Salt Lake City, Utah 84112

EXAMINER	
N.C. Byers	
ART UNIT	PAPER NUMBER
351	#9

DATE MAILED: APR 27 1979

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

GROUP 350

[X] This application has been examined. [X] Responsive to communication filed on 2/11/79 [ ] This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:
1. [X] Notice of References Cited, Form PTO-892. 2. [ ] Notice of Informal Patent Drawing, PTO-948.
3. [ ] Notice of Informal Patent Application, Form PTO-152. 4. [ ] _____

Part II SUMMARY OF ACTION
1. [X] Claims 1 - 30 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. [ ] Claims _____ have been cancelled.
3. [ ] Claims _____ are allowed.
4. [X] Claims 1-20 are rejected.
5. [X] Claims 21-29 are objected to.
6. [ ] Claims _____ are subject to restriction or election requirement.
7. [ ] The formal drawings filed on _____ are acceptable.
8. [ ] The drawing correction request filed on _____ has been [ ] approved. [ ] disapproved.
9. [ ] Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has
[ ] been received. [ ] not been received. [ ] been filed in parent application, serial no. _____,
filed on _____.
10. [ ] Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
11. [X] Other

Claims 1-19 and 21-30 avoid the prior art, and rejections of record.

EXAMINER'S ACTION

APPENDIX K

United States Patent [19] [11] **4,092,081**
Schmanski [45] **May 30, 1978**

[54] **ROADWAY/TRAFFIC DELINEATOR**

[75] Inventor: **Donald W. Schmanski, Carson City, Nev.**

[73] Assignee: **HPC, Inc., Carson City, Nev.**

[21] Appl. No.: **812,643**

[22] Filed: **Jul. 5, 1977**

[51] Int. Cl.[2] **E01F 9/00**
[52] U.S. Cl. **404/10**
[58] Field of Search ..... 404/9, 10, 40/145 A; 256/1

[56] **References Cited**

U.S. PATENT DOCUMENTS

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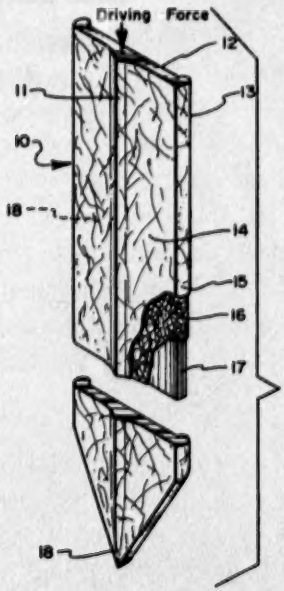
3,820,906	6/1974	Katt	404/10 X

Primary Examiner—Nile C. Byers
Attorney, Agent, or Firm—Criddle, Thorpe & Western

[57] **ABSTRACT**

A post designed for sign or guide marker use having sufficient longitudinal rigidity to withstand a force driving it into the ground and sufficient elasticity to permit nondestructive deformation upon impact by a moving object, with subsequent restoration to an original, upright position. Various construction materials and/or structural configurations are disclosed for obtaining this dual character without incurring high production and material costs.

36 Claims, 13 Drawing Figures



[EXTRACTS]

1

ROADWAY/TRAFFIC DELINEATOR BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to roadway markers or guide posts. More particularly, it is concerned with resilient posts which permit nondestructive deformation upon impact by a moving object.

2. Prior Art

Vehicle traffic control requires the use of road signs and markers as aids in solving the various problems associated with traffic safety and direction. It has been found that a useful characteristic for such signs and markers is that these posts have the ability to withstand vehicle impact, without requiring subsequent replacement. An attempt has been made to fill this need with various configurations of posts. However, the structural design of such posts has involved the consideration of two opposing structural features, i.e. the elasticity required during dynamic conditions to permit the post to nondestructively bend with vehicle impact and the longitudinal rigidity required during static conditions to withstand forces resulting as the post is driven into a hard surface.

The elasticity is necessary in view of frequent high speeds associated with impacts between a moving vehicle and stationary post. In such cases, if the post could not bend it would likely shear off, and would have to be replaced. Mere bendability, however, is not sufficient, since each time a post was bent it would have to be

straightened before it could again be functional. This could involve high maintenance costs. Ideally, a post should also have sufficient elasticity that it will automatically assume its proper upright configuration after dissipation of any impact forces.

While elasticity is desirable, the elasticity may present a practical problem when installation of the post is considered. In the past, when deformable plastics have been used as post material, installation has frequently required predrilling a hole or insertion of some support receptacle into the ground, with the subsequent positioning of the plastic post into the hole or receptacle. These preliminary steps were required because such previously known elastic posts would not withstand a buckling force applied during attempts to drive the posts into hard surfaces. Consequently, the same elastic properties which permitted the nondestructive deformation upon impact caused the buckling of a post subjected to a driving force along its axis.

Attempts have been made to incorporate the dual requirements of elasticity and rigidity by utilizing a spring within an otherwise rigid post, and with the rigid parts of the post being secured on opposite ends of the spring. Installation was by compressing the spring and then pounding along the now rigid longitudinal axis. After installation, the deformable character of the post was accomplished by the transverse elastic property of the included spring.

This configuration, however, has several apparent

disadvantages. The rigid portion of the structure has customarily been made of strong materials which may dent or otherwise damage the impacting vehicle. Furthermore, the use of such rigid materials and springs and the assembly requirements result in exclusive costs for the posts.

U.S. Pat. No. 3,875,720 discloses a second approach to the problem, of providing elasticity in a post that can be driven. In this patent a post is formed by a bundle of flexible rods that are clamped together to obtain the desired rigid property required during the static installation stage of the post. Deformation of the post during dynamic conditions is permitted by deflection of the various flexible rods away from the central axis of the post structure. Here again, however, economic factors appear to have impeded utilization of such structure despite the growing need for such a post.

OBJECTS AND SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a deformable post configuration having both longitudinal rigidity and bending elasticity to facilitate driving emplacement and subsequent impact without destructive deformation.

It is a further object of the present invention to obtain this dual character by utilization of a geometrical configuration adapted to minimize bending stress while at the same time retaining the high modulus of elasticity necessary to preserve longitudinal rigidity.

An additional object of the present invention is to accomplish the aforementioned dual character by means of reinforcing a web structure with a suitable arrangement of fibers.

A still further object of this invention is to develop the desired dual character of elasticity and rigidity by incorporating reinforcing rib structure longitudinally along the post structure.

It is yet another object of the present invention to provide a post structure having transverse flexibility to permit lateral contortion and/or deformation to a minimal thickness and thereby reduce moment of inertia and bending stress.

It is also an object of this invention to provide means for protecting attached marker materials from impact and weather degradation.

These and other objects of the present invention are realized in a post configuration (hereinafter referred to as a delineator) wherein the delineator comprises an elongated web and associated reinforcing structure. The web portion of the delineator provides the flexible properties which permit bending of the delineator in response to a bending impact force. The reinforcing structure is necessary to develop a high modulus of elasticity along the longitudinal axis of the delineator. Such reinforcing structure is implemented by specific utilization of fiber orientation within the web structure or by configuring the structure geometrically to provide ribs having the desired high modulus of elasticity which will complement

having sufficient inner surface conformity with said delineator to restrain bending movement of said portion when said driving load is applied.

13. A delineator as defined in claim 12, wherein said casing further comprises an impactable cap for receiving said driving force and for retaining said casing at an upper portion of said delineator.

17. A delineator as defined in claim 1, wherein said web structure is concavo-convex at the forward and rearward faces thereof.

18. A delineator as defined in claim 17, further comprising longitudinal rib structure at side edges of said web structure, said rib structure adding additional longitudinal rigidity to withstand said buckling loads occurring during installation of said delineator.

20. A delineator including:

a web structure of unibody construction having a tapered base to facilitate insertion thereof into a hard surface and being constructed of a material composition substantially uniform along the length of said delineator which develops a modulus of elasticity (E) sufficiently high, when taken in combination with the moment of inertia (I) of said web structure, to develop a maximum buckling load (P_B) in accordance with a delineator length parameter (L) as defined by the relation $P_B = (\pi^2 EI)/L^2$ wherein the resulting buckling load (P_B) is capable of withstanding an impact

force to be applied near the top of a longitudinal axis of said delineator during static installation conditions at said hard surface;

said product of EI being variable in response to deformation of said delineator by a lateral impact force which modifies said geometic structure to decrease the moment of inertia (I) and develop a delineator bending radius (R) as defined by the relationship $R = EI/M$, wherein M is the bending moment of said delineator, said bending radius being sufficiently low to permit passage of a vehicle over said delineator, said material composition having sufficient elasticity to restore to its upright orientation upon dissipation of said impact force;

said geometric structure comprising a nonplanar impacting surface of said web structure which responds with angular contortion upon occurrence of said impact, thereby decreasing the moment of inertia of said delineator during bending motion, reducing said EI product from a longitudinal rigid structure to a flexible structure during deformation.

24. A delineator as defined in claim 20, wherein the web structure comprises a concavo-convex structure for the front and backside of said delineator.

25. A delineator as defined in claim 24, wherein longitudinal ribs extend from sides of said concavo-convex web structure.